



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization:
Grande Ronde Hospital

Organization URL:
www.grh.org

Project Name:
Improving Rural Access, Safety and Cost of Healthcare Services through Remote Presence Technology

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Grande Ronde Hospital (GRH) in La Grande, Oregon, is the largest of seven communities nestled in the Grande Ronde Valley of Northeast Oregon's Blue Mountains. Although the hospital's primary service area is Union County, pop. 25,000, patients come from a tri-county region. The closest major medical facilities are 177 miles east or 259 miles west. Encircled by two mountain ranges, travel in and out of the valley is often impacted. Winter travel over mountain passes is especially treacherous, subject to frequent freeway closures usually a few hours, but delays can be much longer. In addition to the seasonal challenges of outbound travel, bringing specialty physicians into the valley is unrealistic due to unsustainability in a small population/patient base. GRH saw the potential for expanding access to healthcare services for its patients after being approached in 2007 by Saint Alphonsus Health System (St. Al's) in Boise, Idaho, about an educational program via remote presence technology (RPT). Since implementing

our Telemedicine Program in the fall of 2008, savings from medical transfers and follow-up specialty consults have been tracked. Each transfer costs the system \$28,000. In 42 months, the program has been able to avoid 51 patient transfers and save the system \$1.287 million while providing our patients access to specialty care here at home. In 2010, our TeleOncology Program saved our patients a total of 27,348 miles in travel, \$13,674 in travel expenses and 556 hours in travel time. And because some patients were able to go back to work the same day as their treatment, we also saved our patients the potential of lost wages. Since August 2010, our TeleDermatology services have saved 77 patients a total of 12,782 miles, 270 hours in travel and \$6,600 in expenses.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

In 2007, St. Al's was seeking participants in a research project to create a standardized perioperative nurse preceptor program delivered through RPT to small rural hospitals. They had a research grant from the U.S. Department of Defense's Telemedicine and Advanced Technology Research Center. InTouch Technologies Inc., in California, designed the remote-presence robot, or RP-7. In less than four years, GRH has leveraged this technology to a level even St. Al's had not anticipated. With RP-7, healthcare providers "beam in" to hospital via a real-time broadband two-way connection to not only observe, but interact. The provider sees and is seen through a flat-screen monitor the head of the robot that rotates for a 360-degree view and zooms in or out. The robot is controlled via laptop, joystick and software connected through the Internet. The RP-7 rolls through the hospital via the controller, even docking itself for battery recharge. The robot is equipped with a telephone handset for privacy, a printer for doctors' orders and more. Remote doctors can also pull up electronic medical records and display relevant data on a split-screen. In 2008, a hurdle regarding delivery of "hands-on" healthcare threatened the viability of GRH's fledgling program. After successfully demonstrating the RP-7's capabilities to the Oregon Medical Board, GRH was able to convince the Board to adopt an immediate temporary ruling allowing physicians to practice telemedicine across Oregon state lines. The rule became permanent in January 2009. Due to GRH's efforts, healthcare delivery via telemedicine has not only benefitted our patients and physicians, but the state of Oregon and, indeed, the entire United States. GRH, a small 25-bed critical access hospital is considered an industry model for telemedicine programs.

Please list the specific humanitarian benefits the project has yielded so far.

Telemedicine has revolutionized healthcare delivery for rural patients. GRH's continued commitment is to expand local opportunities for improved health care

with its Telemedicine Program through medical consults, specialty care, staff education opportunities and more. The hospital partners with specialists from coast to coast to provide consultative services in cardiology, neurology, neonatology, dermatology, and intensive care for stroke, trauma and more. We also provide free education opportunities for the public, such as the Chronic Heart Failure patient education series delivered via the RP-7. We offer Language Access services to our patients, and our free Ambassador program allows family members from our facility to have "face time" with loved ones when transferred to a tertiary facility. In the GRH Family Birthing Center, in the event a premature baby is transferred out and the mother remains behind recovering from a C-section, remote presence allows her to see and talk to her baby via the robot's mile-spanning monitor. Babies are soothed by their mother's voice, and mothers are reassured their babies are well cared for.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

In October, GRH's ICU Nurse Manager Nena Jones asked an Advanced ICU Care intensivist from St. Louis to participate in a presentation on using the RP-7 in the ICU. Nena said: "I can only tell you that when the patients or families consult with these intensivists for the first time, they are not communicating through a robot -- it quickly becomes 'my doctor.' Likewise, I've heard (the intensivists) refer to this unit as 'my ICU.'" Due to the Health Insurance Portability and Accountability Act (HIPAA), patient information is confidential. Several patients from our outpatient oncology services (delivered primarily via remote presence prior to September 2011) have expressed thoughts on the program. Here is one: "The ability to get quality cancer treatment locally was a big deciding factor for me in getting treatment at all. There is no way financially that I could have gotten treatment without working. Not only were they able to work with my schedule, but I feel I got excellent care here." In September 2011, an oncologist from St. Mary's Cancer Center in Washington became the director of Grande Ronde Hospital's new Regional Hematology and Oncology Clinic. For three years, this physician made numerous trips over the Blue Mountains to Grande Ronde Hospital for the outpatient oncology clinic, but the majority was done remotely with the RP-7. Because this physician accepted the opportunity in 2008 to embrace TeleOncology at GRH, he became familiar with the hospital, the staff, the patients and La Grande. Three years later, he moved here as a full-time member of our medical staff. Who would have thought a 25-bed rural hospital could attract a permanent oncologist? With telemedicine, we believe anything is possible. And our future vision is as broad as the Northeast Oregon landscape.

